1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Formosa AD1

F 361 Taiwanese villages are laid out in three basic patterns. Probably the most common is the nucleated or compact type: the dwellings form a compact cluster which is surrounded by the arable land of the village. The second is linear, laid out along a riverbank or road, and the third, the least common, is the scattered settlement whose houses are spaced out over a larger area, which sometimes makes it difficult to determine the exact boundary of the village. Hsin Hsing, like most of the villages in the area, is a compact cluster of dwellings surrounded by farmlands. One can walk completely around the central cluster in about fifteen minutes.

T 361

T [491] [312] The dwelling cluster is bounded on the southwest by the *hsien* dirt road which connects Lukang with the market town of Chi Hu (all of the villages in this immediate area lie on one or the other or both sides of this road) and on the northeast by an irrigation drainage stream which flows into the sea near Lukang. There are two villages quite close to Hsin Hsing. Lo Ts'e (now incorporated into Yung P'ing village) is along the road about three hundred yards to the northwest, and Ta Yu lies along the same road about eight hundred yards to the southwest. Like all the neighboring settlements, both are separated from Hsin Hsing by fields.

T 311 There are a few fields lying within the dwelling area itself. These are small, mainly garden plots, and are mostly on the outskirts rather than within the village. Hsin Hsing villagers own the fields across the road from the village as well as those between Hsin Hsing and the neighboring villages of Ta Yu and Lo Ts'e, but most of the fields operated by the villagers—either as owners or tenants—are usually not so conveniently located. Many lie to the west on the other side of the road and as much as two or three miles away. Some can be reached only by dirt roads and by narrow paths between the fields. The villagers ride their bicycles as far as they can and walk the rest of the way, often carrying heavy farm implements. A boy might go along leading or riding a water buffalo.

T [491] [487] [493] [231]

T 243 312 Village agriculture is focused primarily on wet-rice cultivation. Hsin Hsing village is located in one of the principal agricultural areas of the island, the long flat west-central coastal plain. With the Strait of Formosa to the west and the interior mountains to the east of the area, there is a natural flow of water from the mountains to the lower lands and finally to the sea. The usually plentiful water supply is harnessed by an intricate network of irrigation systems which consist of rivers, dams, pumping stations—both publicly and privately operated—and artificial waterways and ditches which eventually carry water into the maze of fields.

F 132 The area is subject to great seasonal variation in both temperature and precipitation. Although it lies in the semitropical zone—being

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Formosa AD1

just north of the Tropic of Cancer—the winters of this coastal area, unlike the interior, are cold and raw while the summers are extremely hot and humid. Winter temperatures seldom fall below the middle forties, but icy winds frequently blow with almost gale force across from the mainland and the Strait of Formosa. Although the area itself never has snow, on a clear January or February day snow-capped peaks of the high interior mountains to the east can be seen from the village.

As in most of Asia, rain is seasonal. Between 80 and 85 percent of the annual rainfall comes during the late spring and summer months (April to September) (Chen, 1950:5).[1] During the heaviest rains and the late summer typhoon season, roads as well as paddy fields are often flooded. In this particular area, frequently the rain alone makes it possible to transplant the rice seedlings, for the irrigation water is often late in reaching the Hsin Hsing area, lying as it does so far from the mountain headwaters. With the passing of the rainy season the weather is relatively dry for the remainder of the year, and all crops depend almost entirely on water from the elaborate irrigation system.

For two decades or more this area has been able to harvest three crops annually. In the irrigated areas two crops of rice are grown; sometimes a vegetable or some other crop is substituted. The third dry crop is usually wheat or sweet potatoes. On dry land, two or possibly three crops a year are grown as well. Such intensive cultivation has been made possible through a favorable climate, irrigation facilities, and an increased availability of chemical fertilizer. It has also come about partially as a result of the population increase, which has provided additional labor to work the available land and to exploit previously undeveloped lands.

Although most of the original inhabitants from the mainland settled on the relatively fertile coastal plain where Hsin Hsing is located, the land resources could not be fully exploited because of their small number. Today, this situation is reversed, and in spite of large-scale irrigation, land scarcity makes it necessary for parts of expanding families, and even whole households, to move to urban centers to find work. Land scarcity in the whole Hsin Hsing area is so severe that even villagers who remain there must go outside the village to earn a livelihood for their families or to supplement the family income. Although the problem may be unusually acute in Hsin Hsing village and in some neighboring villages, it must nevertheless be recognized that it is characteristic of a large part of Taiwan. If the population of the rural areas of the island continues to grow at its present rate, the land scarcity which is now so severe in the Hsin Hsing area will undoubtedly become a major problem for the greater part of the Taiwan countryside.

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

grown depends mainly on the type of soil in the field. In the Hsin Hsing village area, most of the farmers grow the native *tsai lai* rice because it best withstands the weather, disease, and insects.

Within each major type of rice there are also sub-types, each of which has a slightly different growing season. A farmer may plant different types or sub-types in different plots, so that he will not have to plant and harvest all his rice fields at the same time.

The entire rice-growing operation is performed by hand labor. The farmer germinates his best rice from an earlier crop and then broadcasts it in a small, muddy, well-fertilized seedbed. While the seedlings grow—a period of thirty to fifty days for the first crop and fifteen to twenty days for the second—the paddy field is prepared for the transfer of the seedlings. The field is prepared in several operations; a water buffalo draws a wooden plow with a steel blade of adjustable depth and two different kinds of harrows. The preparation of one *chia* (= 2.39 acres) of land takes about seven days for one water buffalo and one laborer. Since many villagers do not own a buffalo (and even a landlord usually does not own one since he would not do his own heavy work), the animal and its owner—usually a fellow villager—must be hired to do the fieldwork. In 1958, the cost of hiring a water buffalo and a laborer was about NT $60–70 per day.

After the rice paddy is flooded the seedlings are removed from the seedbed by hand and transferred in rows by a small group of hired specialists. Such a man can transplant about 0.15 *chia* (0.36 acres) of land in one day. In 1958 he was paid over NT $20 a day, and at night he was given a large dinner, wine, and cigarettes. In the Hsin Hsing area this is considered a fairly high wage for a day's work. On the day the rice seedlings are transplanted, the wives of many farmers go to the village Earth God Temple to worship and pray for a good crop. Such food as whole fish, meat, and fowl are sacrificed and later served to the laborers.

Three times during the growing season the rice paddies are allowed to become relatively dry, to make weeding possible. This is done by the farmer's family or by hired village women who receive about NT $6 per day and no food. Also, during the growing period (about eighty-five to one hundred days after transplanting for the first crop, but a shorter time for the second), the fields are fertilized twice and sprayed with insecticide if necessary.

Rice harvesting is done by men and women in groups of ten; they are either hired or exchange labor. Usually a group of all men is preferred. Such a group can harvest an average of a little over 0.5 *chia* (1.2 acres) per day. The amount of land harvested depends upon the distance of the field from the house, and thus the distance the rice must be carried after threshing.

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

243 461 [177] [407] [426] [427] A group of ten laborers works in the field as a unit, usually taking turns at the different tasks. Four laborers will cut the rice while four others collect it and thresh it in the rotary foot-pedal threshing machine. (This machine was introduced by the Japanese in the 1930's, and is now found throughout the area.) The machine is sometimes owned by the land operator but is often either borrowed or rented. While the eight laborers are cutting and threshing, another laborer binds up the threshed rice straw, leaving it in bundles across the field. Still another laborer separates the rice from the straw in the box of the machine and puts the threshed rice into baskets, which are later carried to the farmer's house for drying, winnowing, and storing. The straw bundles are later collected and put in big stacks near the farmer's house. The straw is gradually used for fuel, compost, and animal bedding. [824]

243 433 [262] [231] [442] [256] The harvested rice is then used to pay taxes and rent and for fertilizer or for human and animal (fowl) consumption. The surplus may be sold either to an itinerant broker or one in Lukang. The rice which is eaten or sold to brokers is milled locally. One *chin* of land in the first crop produces about 7,000 to 8,000 *chin* of *tsai lai* rice, or about 10,000 *chin* of *p'eng lai* rice. (One *chin* is equivalent to one and one-third pounds.)

434 243 [423] However, the landholdings in Hsin Hsing are small, and it is fairly common for more than 50 percent of the village farmers not to realize any cash for the crop. The greater part of the rice crop in general, even in areas with larger landholdings, is used by the farmer to feed his family and to pay various operating expenses. These operating expenses include, beyond labor costs, the payment of taxes, land payments either to the government—if the land was purchased under the Land Reform Acts—or rent to a private landlord, and payment for fertilizer. (The payment of these expenses in kind creates a problem which will be discussed in some detail later in this chapter.)

243 If the third crop is wheat, it is planted immediately after the second crop, anytime from late October to early or even mid-December. Wheat in Hsin Hsing is harvested from mid-February to mid-March, depending on when it was planted. It is harvested by hand, the plant being pulled up root and all. It is threshed in the same machine used for rice and then completely dried in the sun. Usually, a broker comes to the village soon after the harvest to buy the farmers' wheat. Although the price for a *chin* of wheat is higher than for a *chin* of rice, one *chia* of land can produce less than half the amount of wheat than it can of rice. (One *chia* of land produces about 3,000–4,000 *chin* of wheat.) In the past the crops have often been plagued by a wheat disease, and for this reason many farmers still do not like to grow wheat. [401] [442] [435] [433]

244 In the Hsin Hsing area sweet potatoes are the principal dry-land

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

ing the course of that year. It can be planted anytime after the cold in mid-February and throughout March. The harvest then starts with the first cutting, about mid-May and throughout June. Once cut the crop grows again; in forty days it is ready for cutting. The third crop matures in about fifty days and the fourth in about sixty days. The last crop is harvested toward the end of November, before the cold weather and winds again set in.

Since sugarcane requires eighteen months to cultivate, the man who plants it instead of rice is usually one who has land enough—probably over one *chia*—to allow him to put a decent acreage into cane and still have enough left for crops which bring more immediate returns. And he must have enough capital or other means to finance his family during the long growing season of the cane.

Before the war, when the price of sugarcane was higher than it is today, many farmers in Hsin Hsing and the surrounding area grew this crop. Now, however, few farmers are willing to tie up their land for one crop of cane when the fields, over the same period of time, could otherwise produce four different crops. Those few farmers in the area who have recently cultivated sugarcane have done so in the belief that it would bring a greater profit than they could get from rice. However, in 1958 they were disappointed when the low market price of sugar brought them even smaller profits than they would have realized from rice. Today, despite the coaxing and cajolery of agents of the Taiwan Sugar Corporation, even these few farmers are loath to plant sugarcane, and the acreage devoted to cane in the area is steadily decreasing.

The third annual crop is grown during the winter when there is no irrigation water available. In Hsin Hsing village and the area generally, the crops cultivated are wheat, sweet potatoes, soybeans, or vegetables such as the green bean. All are crops which do not require much moisture and can tolerate the cold and the strong winter winds. In fact, wheat cannot withstand the hot and often wet weather of the spring, summer, and early fall of the first and second crop periods, but needs rather cooler weather.

THE VILLAGERS' VIEW OF THE CALENDAR AND THE AGRICULTURAL CYCLE

The basic traditional calendar in Taiwan is lunar, and lunar months are referred to here by numbers just as they are by the villagers. The more recent solar calendar is used when villagers refer to recently introduced legal functions such as school activities, tax collection, military conscription, and so on. Farmers almost always use lunar references when they discuss calendar dates for various agricultural

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

If, however, the water level is low and/or the field surface high, the water must be pumped into the field with a foot treadle waterwheel, usually operated by one to three people at a time.

The irrigation water is fed into the many fields which receive it on a rotation system. The fields nearest to the water source receive the water earliest. Thus, when the first water gate in the irrigation canal is closed, the water is diverted into the irrigation ditches and flows into the adjacent area; the flow of water below this water gate is practically stopped. The water in these irrigation ditches is received first by the land closest to the water gate. In each small area the narrow irrigation ditch is blocked with an earth dam which diverts the water into the fields. When the fields are sufficiently flooded, the dam is opened and the water proceeds through the irrigation ditch to the next small dam, where it is again diverted into the fields. When all the fields in the area have been flooded, the first water gate on the canal is opened, and the water flows on through the canal until it reaches the next closed water gate, which again diverts it into the ditches and to the fields. So the rotation system continues down the line, with the land furthest from the water gates and irrigation ditches receiving the water last.

Under such a system, if there is a water shortage the areas nearest the water gates and dams have the best chance of receiving an adequate water supply. The farmers call this area the "water head." The area most distant from the water gates and dams is known as the "water tail." Farmers whose fields must wait until the last for water usually suffer from an insufficient water supply for their crops, especially for rice.

Even if there is not a water shortage, the farmers who cultivate fields in the water tail normally plant their rice later than the farmers in the water head, which creates a natural staggering of the planting and harvesting in the area. However, when there is a water shortage, it is often necessary, especially for the farmers in the water tail, to delay the transplanting of the rice seedlings and sometimes even to substitute another crop. Most of the land tilled by the Hsin Hsing villagers is in the water tail, and during the course of the research period it was common to see plowed fields waiting for weeks to be flooded or to see rice withering in the dry and cracking soil. As a result frequently the rice production of the area is disappointingly small, and the water problem is a constant concern of the villagers, even the young children. Water and the coming of water is often the main topic of conversation for weeks on end.

Sometimes the water problem becomes so grave that farmers may resort to "stealing water," secretly opening a water gate or an earthen dam in an irrigation ditch so that they can obtain their water out of

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

[P. 148-C]

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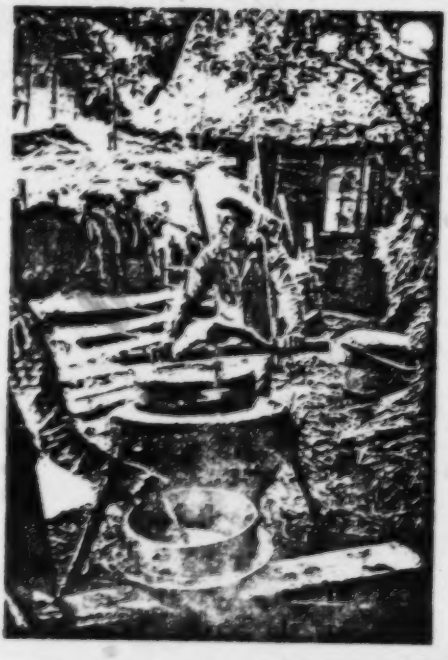
ABOVE: Stacking rice straw after harvest. RIGHT: Grinding glutinous rice for holiday cakes.



1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

fields: the economic, the social and religious, and the mediatorial and political. The relationship between *ch'in ch'i* depends upon propinquity; ideally, *ch'in ch'i* live close enough so that contact with each other is not a hardship, and yet preferably not so close as in the same village. Most marriages and adoptions usually involve persons within an area which can be readily spanned by bicycle. Another factor is *kan-ch'ing* with one's *ch'in ch'i*. Here it should be noted that the *ch'in ch'i* relationship in itself is ordinarily the best basis for good relations. The continuance of good relations is probably aided by the maintenance of social distance or, in other words, a lack of the overintimacy which so often causes ill-feeling between *tsu* relatives. As already indicated, it is perhaps for this reason that ties established by marriage within the village often become more similar to those of *ch'in tsu* than of *ch'in ch'i*. This in itself reinforces a preference for marriage outside the village. Good *kan-ch'ing* is also maintained as a result of a determined effort on the part of *ch'in ch'i*. *Ch'in ch'i* are almost always ready to help each other in times of any kind of need.

The very fact that one's *ch'in ch'i* usually do not live in the same village, although in the same general area, is of major significance economically. In a wet-rice growing area, where paddy fields must be flooded several times during the course of the growing of each rice crop, irrigation is very important. Because of the nature of the irrigation systems, two adjacent villages, although geographically very close, may be weeks apart in their agricultural cycles if they obtain their water from two different irrigation systems. For example, one village may be at the end of one irrigation system, while the next village down the road may be at the beginning of another irrigation system. At the time the village on the beginning of the irrigation system has already transplanted its rice seedlings into the flooded rice paddy fields, and is perhaps already preparing for the first weeding, the neighboring village on the other end may still be waiting for the water to come through so that the fields may be flooded and prepared for transplanting the rice seedlings. Although not all of one's fellow villagers have land in the same immediate area or within the same irrigation system, it is nevertheless unlikely that many cycle differences will be greater than a few days for most of one's fellow villagers. Therefore, the greater difference in agricultural cycle between *ch'in ch'i* living in different areas makes possible an amount of economic interchange usually not possible between fellow villagers.

The outright gift or sale at a comparatively low price of rice seedlings by one *ch'in ch'i* to another living in some other area has direct bearing on the cyclical differences resulting from differences in irrigation systems. A Hsin Hsing villager on the end of the irrigation system who loses his rice seedlings in the seedbed as a result of insufficient

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

water may turn to one of his *ch'in ch'i* whose area has an earlier cycle. Since it is not unusual for a farmer to have an excess of seedlings after transplanting, he will usually give his *ch'in ch'i* the seedlings for the asking. If extra seedlings are not available through a *ch'in ch'i*, it then becomes necessary to purchase the seedlings, often at a high price.

If a villager should for some reason be unable to arrange for the necessary labor to harvest his crop, he knows that he may call upon some of his *ch'in ch'i* who are not at the time engaged in their own harvesting to come to his aid. Since a whole area must usually be harvested over a period of a single week, labor shortage is a frequent problem. The latter is especially serious if a typhoon threatens; then a crop may have to be harvested immediately. Under such conditions, one's *ch'in ch'i*, if available, come to help without expecting wages. The *ch'in ch'i* who gives his labor knows that at some future date he can expect to receive similar help. This is not only true in times of emergency; there is frequently an informal exchange of labor in house building or other economic functions. If at all possible, a *ch'in ch'i* always holds himself ready to extend such aid.

The availability of a *ch'in ch'i*'s aid also extends to money loans. When a villager is in financial need and wishes to organize a money-lending club he may ask several of his *ch'in ch'i* who live nearby to take part in the group of ten or more *tsu* relatives and fellow villagers who usually make up such a club. There are also cases in the area where villagers have gone into joint business ventures with *ch'in ch'i* much like those which Lin (1947) described in *The Golden Wing*, although on a far smaller scale.

As mentioned in Chapter 3, Hsin Hsing villagers' *ch'in ch'i* living in other villages are frequently helpful during harvest seasons as contacts in finding work for Hsin Hsing villagers on harvest labor teams in other places. Perhaps more important, they contact labor teams from other villages to come to harvest in Hsin Hsing. Still another type of help given by *ch'in ch'i* is to introduce Hsin Hsing village vegetable peddlers to customers in other villages.

Ch'in ch'i relationships are not only important economically but have social value as well. As will be seen later, social activity in Taiwan is intertwined with religious activity. The activity in the villages of Taiwan is marked by many *pai-pai*, which frequently involve large numbers of people and great quantities of food. When a large *pai-pai* is held in the village, every family participates. An occasion for a *pai-pai* in one village does not usually coincide with a *pai-pai* occasion in another, which makes a certain amount of visiting possible.

Usually, the most festive *pai-pai* is that for the village god. Since all the village families celebrate it at the same time, it is impossible to

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

881 Many *ch'in ch'i*, friends from outside the village and some fellow
574 villagers are invited to share the food and drink which were offered to
612 the gods. For the most part the *ch'in tsu* and other villagers who are
[462] present are there primarily to help serve and entertain the guests from outside. Women, who never serve food at village festivals, work in the kitchen, helping to prepare the food for the male chefs.

882 At sixteen a boy is, in theory, considered an adult, ready to take on adult responsibilities. Although he does have some new responsibilities and privileges, he is nevertheless not really considered an adult until he becomes a father and may frequently not be treated as an adult until he is himself the head of a household. However, at sixteen there are certain changes in social status for the boy. He may, for example, now represent his father and his family at village meetings, voting for his father if the occasion should arise and even speaking for his family. In addition, it is considered proper for the head of a household to leave his sixteen-year-old son to act as host and entertain the family's houseguests.

882 A boy of sixteen is considered old enough to leave home by himself
883 to work in the city. Although there are boys under sixteen working in
593 Taipei, their parents are quick to point out that their fathers are there to watch over them. It would be considered highly irregular for a
[626] village family to allow a younger boy to be in the city unsupervised. Villagers are always concerned about possible criticisms of the way they bring up their children. If something should happen to an unsupervised boy in the city or if he should get into trouble, people immediately say that the parents are at fault because they neglected their duty and did not take proper care of their son. Therefore, the social recognition of a boy as an adult at age sixteen in a sense protects his parents from criticism and alleviates their pangs of conscience should something happen to the older boy who is away from home alone.

883 As boys move into their mid-teens they begin to take on added
882 responsibilities in the economic life of the family. More and more of their labor and their earnings, if any, are contributed to the family treasury. At about eighteen the boy begins to do many of the field chores. At this time he also may hire out as a field laborer, receiving a
[868] man's wages. Sometimes a fellow villager may teach him how to trans-
743 plant rice seedlings, for which training the boy receives meals but very
[465] little financial remuneration. Once he has learned this skill, however, the boy can hire out as a laborer at NT $20 to $25 per day.

883 Although the boy now begins to take on many responsibilities, he still spends a great deal of time playing with his friends. Village boys in their late teens and early twenties form small groups and spend much time together telling stories, going into town, and generally

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5

category which will be labeled for convenience noncalendrical. Both categories, whether the rites are performed by the village or community, or by the family or *tsu*, are rites of intensification which foster solidarity and reinforce social and cultural values.

Of the recurrent rites whose timing is determined by the family rather than the village, one type of non-calendrical *pai-pai* consists of those connected with the agricultural cycle which are held regularly by most village families at the same general times of the year—the rites to the Earth God, T'u Ti Kung (usually following the transferral of rice seedlings into the paddy field), those following the sale of one's pigs, and the like. In the former instance, the hired field hands who helped transfer the rice seedlings join the male members of the family in eating the sacrificial food offerings, including "meat, fish, wine and other good things." In the latter instance, after propitiating the Earth God, the family eats its simple sacrifices which may include wine if friends or nearby *ch'in ch'i* are invited.

The other kind of recurrent rite is the ancestral-worship ceremonies; these are not included in the category of such rites commonly carried out according to the calendrical schedule of religious rituals. However, a number of rites associated with ancestral worship, such as those held on the lunar New Year, the fifteenth day of the first month, Ch'ing Ming Chieh, and the fifteenth day of the seventh month, are regular cyclic rites performed by everyone at the same time. It is the anniversaries of the death dates of a family's ancestors (determined separately for or by the individual family or *tsu*) which are not considered part of the annual calendar of the community. On such an occasion, either the individual family, several patrilineally related families, or a whole *tsu* group or religious family will worship the deceased ancestor. The worship is always held in the *kung t'ing*, since not even the larger village *tsu* have ancestral halls. The number of family units which participate in the worship depends upon whether the ancestor is held in common by many families or considered the progenitor of only one particular family. As already explained in Chapter 5, in Hsin Hsing village the women usually take the leading part in the ceremonies, even though they are in a sense outsiders worshipping their husbands' ancestors.

The ceremony usually begins with the burning of incense at the time of day at which the ancestor died. The food offerings "sacrificed" are later eaten by the participants. The amount depends upon the economic situation of the family or families. Well-to-do families will offer larger quantities of food than poorer families, which usually means that a greater number of relatives and friends will be invited to share the feast. However, the food considered proper for sacrifice on any occasion is relatively standardized regardless of the financial condition of the family, varying only with extreme wealth or poverty.

342 in winter.

351 Most of the dwellings of farmers have a pounded
243 earth courtyard for drying rice and as a place to work.
414 Recently, the farmers' association has provided half the cement necessary to cover the courtyard and many villagers have taken advantage of the offer, the first in 1961. Borrowing the use of a cemented courtyard is now quite
343 common. Farm outbuildings such as pig pens are extremely crude with only partial walls and a thatch roof.

342 A dwelling typically has a regular sequence of development. The first step is a rectangle 15 feet deep and 20 or more feet wide. The main room will be the kung t'ing which is a combination of sitting, dining, ancestral worship, and general main room in the house. The usual room dimensions are a 15 foot depth and a width of 10 or 15 feet. Extended out on either side are other rooms, each 10 or 15 feet wide. Such rooms will be added as needed until the building is three or five rooms long with the kung t'ing in the center accessed through a central door. One of the rooms is a kitchen but if there are only two rooms, the kitchen may be a temporary attached leanto.

787 It is best to have a geomancer orient the house for good luck (see Chapter VII). Many people skip this step by copying the orientation of nearby houses although this is contrary to the theory of geomancy (ti-li or feng-shui).

The amount of annual taxes varies considerably according to the classification and grade and various government land reform acts affected only certain categories of land. The most important and valuable kind of land is that classified as paddy field, most of it grade 12 or 13. The grade number assigned reflects productivity and consequently taxes, the higher the number, the lower the value. The current market price is $180,000.00 per chia, nearly $1,900.00 U.S. per acre.

As pointed out in the section on topography, Sanlei is in a narrow valley between two small mountain chains. The only paddy land is on the terraced steps which comprise the valley floor between the sharply rising foothills. Paddy land totals only 13.2920 chia (see Table 3), less than 32 acres. This is divided into 200 plots ranging in size from .0002 chia to .4716 chia. The mean size is .0665 chia (.16 acres), but this figure does not faithfully portray the real situation for the mean has been increased by a few larger plots. The median figure of .0350 (.08 acres) indicates that fifty per cent of the plots are less than half the mean. This extreme case of land fragmentation is partially due to a historical accident and partially due to the normal Chinese inheritance pattern.

As previously stated, Sanlei was founded around 1830 by 18 hu (households) from the same community in

423 piece for a .009 chia piece plus a sum of cash, and was the culmination of a two-year negotiation process.

311 243 The registered plot sizes are not directly related to the size of the paddy fields. Larger plots may be divided into two or more fields and some smaller plots are combined into one field. Both the extreme fragmentation and the narrowness of the terraces contribute to the small size of paddies. Correlated with the small size is the complete absence of gasoline-powered cultivators which have become so popular on the plains. This degree of fragmentation does not permit the most efficient use of the land. The government has begun a program of land consolidation in other parts of the island (Department of Information, Taiwan Provincial Government, 1962:78-83). Although villagers are aware of the program and believe it would be a valuable step for the village, everyone fears he would not get a reasonable share in a government-ordered consolidation, i.e., he would give up pieces more valuable than he would receive. Although theoretically the process should be seen as a zero-sum game, no villager can be found who thinks he would be a winner or even break even.

311 423 659

423 421 659 Prior to the above-discussed land consolidation, Taiwan underwent an extensive land reform program which proceeded through three steps. The first step was rent reduction, enforced in April of 1949, which limited farm

423 owners participated because of a fear the improved land
[651] would be given a higher grade resulting in increased taxes. Although reassessment has still not occurred, non-participants keep saying it soon will.

Irrigation

132 Rainfall in northern Taiwan is reasonably adequate
133 every month of the year. There are small mountains running parallel to the village on each side with a small
312 stream down the middle. The mountains produce a considerable water run-off which is channeled to the paddy fields where needed. Only about once every seven or eight years is there a serious shortage of water but there are slight shortages yearly in June and July. There are no water irrigation associations because there is so much surplus water and so many places that it can be tapped, that the small short channels are maintained informally by farmers in the few fields using each source. Only once in fifteen months did we observe a conflict over water levels in spite of these extremely informal arrangements. However, children get in trouble when they play in the fields and break down the barriers and let water fall below requisite levels.

Rice

243 Paddy fields are considered to be the most valuable
311 kind of agricultural land. From the earliest inception of

the village, the flat land has been largely devoted to irrigated fields for the cultivation of rice. As specified above, the available water from the mountainsides has always permitted irrigation with a minimum of effort. Sanlei is a double-cropping area, most paddy fields having two crops of rice each year with the occasional substitution of sweet potatoes for rice. In the last ten to fifteen years, there has been the inauguration of a third crop of vegetables in the paddy fields for about half of the fields while the other half stands idle.

There are two major varieties of rice, the native tsai lai and the p'eng lai[1] which was introduced by the Japanese. P'eng lai has a much higher yield, brings a better market price, and especially important today, is much more responsive in yield increase to applications of fertilizer. However, it is somewhat less resistant to weather, insects, and disease, the latter two especially significant for the second crop. According to local informants, p'eng lai requires rich and deep soil. Since the good soil in Sanlei is about four to six inches deep, insufficient for p'eng lai, experiments with p'eng lai have often proved disastrous and today, only two or three farmers plant it and only in fields closest to the bottom of the valley, next to the river. As a result, tsai lai is the major form grown in Talei Li.

• 243 In the middle of December (Solar Calendar),[2] after three days soaking, rice seeds for the first crop are scattered thickly on a well-prepared fertilized field. They take forty to fifty days to grow to a sufficient size for transplanting. In the latter part of January, the [231] field is prepared. It takes one man with a water buffalo about six or seven days to prepare a one chia field. While there are only two water buffalo in Sanlei village, a [435] nearby village specializes in water buffalo. A man with equipment and buffalo can be hired for $120.00 per day or the buffalo alone may be rented for $60.00 to $70.00 per day. If human fertilizer (night soil) is used, a liberal quantity should now be applied.

243 462 Transplanting is a hard job, rated as work primarily but not exclusively for men as is the other most difficult job of harvesting. All extremely hard work is considered proper for men only but there is no corresponding notion that light work should be reserved for females. At times, men are doing light work while females are doing medium heavy work. There is a bonus of five meals per day for male or female workers alike when engaged in transplanting or harvesting rice, the two jobs rated as the hardest in the community. It would take a seven to eight man crew to transplant a single chia of paddy field. However, given the small size of the fields, most work groups rarely exceed three or four adult males. The planting by

243 462 hand is in bunches of 4 to 7 rice seedlings, 6 to 7 inches apart with one large bunch placed in a corner of the field for use in a second transplanting to replace thinned-out spots in the field. Men are expected to be able to maintain the rows and spacing without the wooden guides needed by women. A woman occasionally transplants rice in her [463] [465] own family fields but it is comparatively rare for women to be hired for transplanting. When a woman is hired for transplanting or harvesting, she earns a regular women's wage (discussed later) but does receive the previously [857] mentioned five-meal bonus. A young boy is a normal part of each transplanting crew with the responsibility of running errands, bringing food and water, and supplying the men with seedlings.

243 There are normally two weedings and occasionally a third; the first is 20-25 days after transplanting and the second and third, 10-15 days after a previous weeding. 242 Chemical fertilizer is applied before weeding. Weeding is 243 performed on hands and knees. Once more, women seldom [462] [474] participate in rice-field activities outside their own family fields and that too is infrequent. There may be an occasional second application of fertilizer which is available from the farmers' association for cash or for rice. It is slightly cheaper in town for cash but no credit facilities are available. The fields will be sprayed with insecticide once or twice.

• 243 Under the best conditions, it is 110 days from transplanting to harvest although this period may range up to 130 days dependent on weather and the particular sub-variety of tsai lai rice used. Harvesting activities cover the latter part of the May through the early part of June. The usual work crew of five or six men take nearly four days to harvest a chia of land. The rice is threshed in a rotary foot-pedal machine, several of which are owned in the area, and then carried in baskets to the house court-yard where it takes three or four days in the sun to dry. The mounds of rice must be regularly turned so that all parts will be exposed to the sun. Women and children usually do the necessary raking but invariably, a man makes the decision when the crop is sufficiently dry. One chia of land produces about 6,000 chin (8,000 pounds) for the first crop. The rice straw is bundled and used for compost or sometimes sold to brokers from the city. For the first crop, due to the shortage of labor and great press of time, much of it is plowed under to enrich the soil.

[462] [857] [433]

In the meantime, the second crop activities start long before the first crop is harvested. The seeds are cast in the second seedbed in a manner similar to the first at the end of April or early in May. However, given the warmer weather, they only take about 30 to 40 days to be ready for transplanting and only about half as much seed

• 243 is needed, about 50 chin per chia.

The period commencing with the harvest of the first crop and ending with completion of transplanting the second is the busiest of the year. It takes a considerable number of people to harvest. By design, not all land is ready for harvesting at once, because the first crop transplanting is somewhat staggered; sub-varieties mature at different rates; and finally, the land closest to the river and road gets more heat and matures quicker than that closest to the mountains. Contributing to the shortage of labor during this period is the need to prepare the field for the second crop and transplanting. It is desired to complete transplanting in a field within ten days after it is harvested but this is difficult to accomplish. The modal time is 15 days with anything beyond 20 days considered a small disaster.

243 462 It is during the above one month period that women are most often to be observed working in the rice fields. In spite of strong sentiment to restrict work on rice to men only, the shortage of labor requires letting women share activities but only as a last resort. Some men who have commuting jobs in the city are able to obtain time off at this period to help with the harvest and part-time coal miners remain home from the mines and help. As far as I could tell, most of the women would just as soon avoid work in the rice field as they claim it is very hard

243 462 on the back. However, two features of the job are attractive to women if they are hired. That evening, they are entertained with dinner and do not have to help prepare dinner or clean up afterwards. Second, some women seemingly enjoy the discomfort to be observed in men watching women doing a man's job. The women who claimed this sentiment were all over forty, but younger ones smiled and giggled when this was repeated to a group.

243 Procedures after transplanting are similar to those described for the first crop: weeding, fertilizer, and insecticide but due to warmer weather seldom does it take more than 110 days from transplanting to harvest. More insecticide is needed because of the warmer weather. When the top of rice starts to bend with weight, the field is dried out in preparation for the next crop of vegetables. The second rice crop in Sanlei produces about as much as the first crop, occasionally more. This is rather unusual for Taiwan as a whole and is due to the fortunate abundance of water in Talei Li. Both crops are much larger than [433] earlier in history due to improved strains and technology but the total production is less in Talei Li than the general average for Taiwanese paddy fields because of the poor and shallow soil.

324 412 438 Rice straw from the second crop is bundled and sold to brokers from Taipei who come out with carts although woman gather and save some of the rice straw to make

443 local stores (20% discount) or to the nearby mine dormitories (10% less than town prices with free delivery).

Subsistence Crops

243 By this category, I refer to those items grown for
244 home consumption. A major item is sweet potatoes which can be grown on dry land in small scattered locations. Occasionally, they are planted at the end of the second crop in a paddy field but in this case, it is not possible to plant the first rice crop the following year. However, the yield is high and part of the field can be used for
262 the rice seedlings. Sweet potatoes are an important part
252 of the local diet, particularly in the form of a fried
231 sweet-potato pancake, steamed, or as a kind of mush. Also, both the leaves and potatoes are excellent for animal
251 fodder. Sliced in chips and dried in the sun, sweet potatoes can be readily preserved for future consumption.
244 When sweet potatoes, which take six months to mature, are planted after the second rice crop, raddish is inter-
[251] planted in a multiple cropping technique. Raddishes, which only take 60 days to mature, are dried and preserved with salt or pickled.

244 Almost every house, even those with no other agricultural activities, will have a small nearby vegetable garden. Several of the very small plots of land away from the households are also devoted to vegetables, but not any

462 regular patterns. Some tasks such as grinding rice are
476 done jointly together while for other tasks, they alternate, i.e., two women rotate care of both sets of children,
[546] preparing lunch, etc. Sometimes, a woman can get into the fields to work for an afternoon or even a whole day or they can take turns with time off to go to town and shop or take
[562] in a movie. Village women see movies more often than men, usually in the afternoon. A new bride in the village soon
[561] has her own circle of friends among women who are in her same age range.

Men's Work Groups

Men's work groups do not seem as structured as
[465] women's. As previously stated, the standard rate of pay
a [243] for a day's labor for a man is $50.00 except there is an addition of a five meal bonus when the work is transplanting or harvesting rice. There is no bargaining in terms of ability or skill; instead, the better workers obtain jobs more frequently.

There are many regular units which trade labor, almost inevitably composed of relatives or sworn brothers. It is easy to keep track of records because one day's labor equals any other day's labor no matter what the activity. Although a day planting rice may be considered more difficult than a day spent weeding oranges, the five meal bonus for the rice work makes the two activities equal. There were 17 such work groups which had at least

461 over extended periods of time. Functionally, there is likely to be some culturally specified alternative to provide such a proportion of relief time from a potential seven-day work week at twelve hours per day, a period for renewal and relaxation. In China, the traditional alternative is provided through religion as it is in many other parts of the world. Due to the nature of all functional explanations, it is not possible to specify why some other alternative could not have served as an adequate substitute.

The Yearly Work Cycle

316 Those work activities unrelated to agriculture are spread relatively evenly across the year. For example, mining is approximately the same all year, only slightly higher production is required during the cold weather. Listed below by month is the yearly cycle of agricultural activities with an approximate indication of the general need for labor. In order to promote continuity, the cycle is started with February which comes closest to marking a natural starting point.

243 February--Busy. Prepare paddy fields and transplant rice seedlings. Fertilize orange orchards.

March, April--Light. Fertilize and weed paddy fields twice. Prepare rice seed bed for second crop. Weed tea plants and commence heaviest harvest. Weed orange trees and apply insecticide.

May, June, Early July--Very Busy. Harvest first rice crop. Prepare paddy fields and plant second crop. Weed tea fields and continue harvest. Weed orange trees, fertilize, and apply insecticide.

243 245 221 Late July, August, September--Light. Fertilize, weed, and apply insecticide to paddy fields twice. Fertilize and cultivate orange orchards. Weed tea fields and continue harvest.

[244] October, November--Very Busy. Harvest second rice crop. Prepare fields and plant vegetables. Complete last small harvest of tea.

244 245 221 December and January--Moderate. Harvest vegetables and oranges. Plant and transplant tea bushes and orange trees.

241 The above schedule provides a general picture of the agricultural activities devoted to the major crops but there are 244 many other minor crops which are not listed. Vegetables are planted, fertilized, weeded, and harvested during various periods all year around. For example, onions and leeks are planted and harvested during nine different months of each 313 year. Finally, during any slack period, trees may be cut down and left on the ground in open piles until sufficiently dry to be carried down the mountainside for home consumption or sale.

182 464 Currently, the ecological adjustment is such that the demand for labor is spread relatively evenly over the entire year. There are now only two periods lasting a total of about eight weeks when there are serious labor shortages and conversely, only about six or seven weeks when there is a moderate to heavy labor surplus.

179 244 243 464 When the village was first established, the main crops were subsistence vegetables and paddy rice. Rice production in a double cropping area necessarily involves large seasonal variations in the demand for labor.

178 Tea was added later and since the demand for labor
245 inputs in tea production tend to occur during relatively
464 slack periods in the cycle of rice production, tea helped even out the demand for labor.

Oranges, which were added more recently, are a second leveling factor in the seasonal labor demands because the date when most required work such as fertilizing, spraying with insecticide, and weeding must be completed is not cru-
[243] cial to eventual production quantities. This technology is unlike that for rice which permits few delays in many steps without serious reduction in the eventual size of the harvest. The only requirement in citrus cultivation for large prompt labor inputs comes during the harvest season which falls in December and January when both rice and tea cultivation activities are either non-existent or are at their slackest periods.

178 This ecological and technological adjustment has
562 been a prime factor contributing to the elevation of the
464 status of women. Some agricultural tasks such as tea pick-
[245] ing and tea sorting are considered appropriate only for
[462] women, and other tasks such as orange orchard weeding are
[34] considered appropriate for either men or women. Because there are jobs such as coal mining readily available for mature men in the immediate area around the village, there has been little surplus of male labor exerting pressure to
[288] replace women with men. In the younger age groups, the